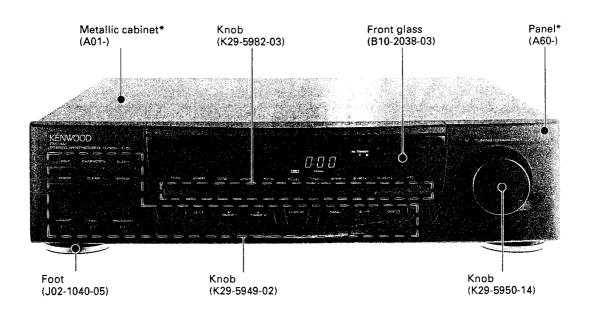
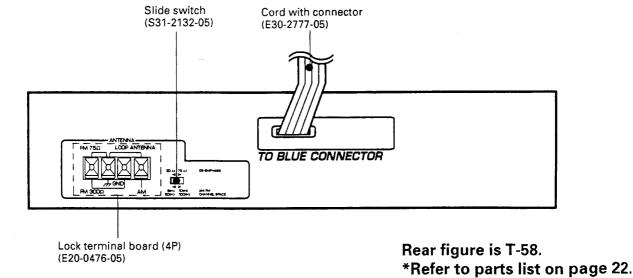
FM/AM STEREO SYNTHESIZER TUNER

# T-58/L SERVICE MANUAL

# **KENWOOD**

© 1994-8 PRINTED IN KOREA B51-4911-00(K)2651





#### PRECAUTIONS FOR REPAIR

- T-58, T-58L don't have a power supply transformer. Use A-58, A-68 or RM-90PS, PS-93UA power supply to supply power, if neither is available, adjust to operate as instructed on page 9.
- When turning the power on, short the Check land (KR5 and KS0) (X05-, B/3).

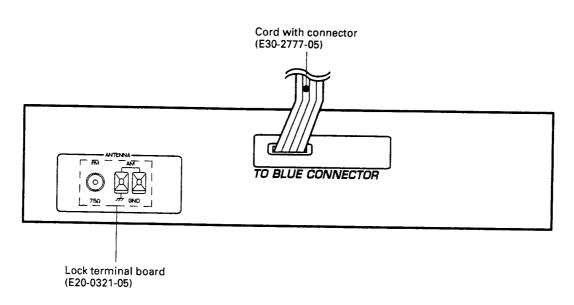
# T-58/L

## **CONTENTS/EXTERNAL VIEW**

CONTENTS
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### **EXTERNAL VIEW: T-58L (Rear panel)**



### **ACCESSORIES**

System configuration

System name	AMP / GE	TUNER	CD/LD PLAYER	CASSETTE DECK	Speakers
MIDI M-58	A-58	T-58L	DP-58	X-58	LS-58
MIDI M-58M	A-58	T-58L	DP-M58	X-58	LS-58
MIDI M-767	A-58	T-58	DP-58	X-58	S-58
MIDI M-868M	A-58	T-58	DP-M58	X-58	S-58
MIDI M-969LD	A-68	T-58	LVD-68	X-58	S-68

· MIDI M-58, M-58M, M-767, M-868M :

Speaker cords are packed with the Speakers. All other accessories are packed with the Amp/GE unit.

· MIDI M-969LD

Speaker cords are packed with the Speakers. Remote control unit and batteries are packed with the CD/LD player unit. All other accessories are packed with the Amp/GE unit.

•	FM indoor antenna
	/TQ0_0192_15\



• AM loop antenna ass'y - \_\_\_\_\_ Loop antenna stand





Except for U.K., Europe and Australia. For the unit with a European AC plug in areas other than Europe.





For U.K. and Europe.

For U.K. and Europe.



• Video cord......1 (E30-1427-05) **M-969LD** only



• Parallel cord ......(E30-2628-05) **M-969LD** only







Battery cover (A09-0106-08)

 Remote control unit (RC-68LD) ...... 1 (X94-1050-71) M-969LD only

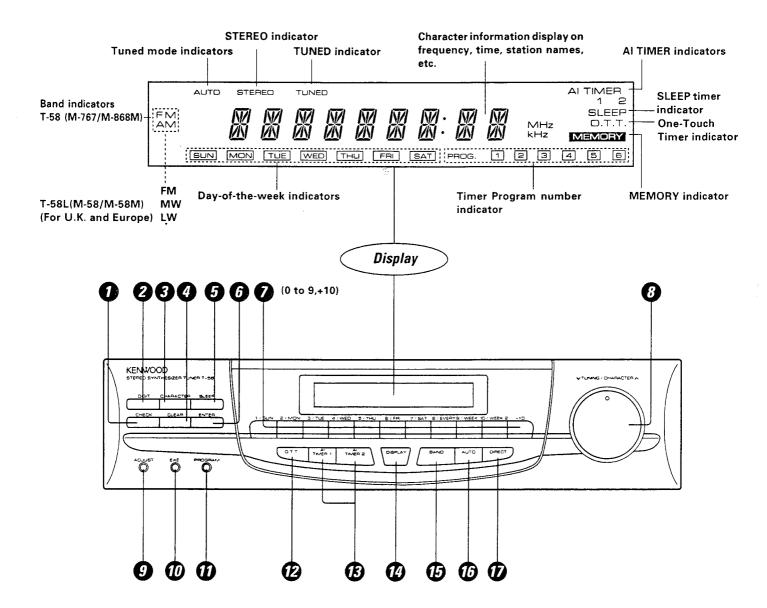


Battery cover (F07-0721-33)

• Batteries ......2



### CONTROL



#### **O**CHECK key

Press for calendar checking.

#### **O**DIGIT key

Press when presetting a radio station name

#### **OCHARACTER** key

Press when presetting a radio station name.

#### **OCLEAR** key

Press to cancel the program timer.

#### **O**SLEEP key

Press to activate the sleep timer.

#### **GENTER** key

Press when adjusting the clock time, setting the timer or presetting a radio station name.

#### Numeric/day-of-the-week keys

Press when selecting the radio station to be received or setting the program timer.

#### **TUNING/CHARACTER** knob

Rotate when selecting the radio station to be received or when presetting a radio station name.

#### ADJUST key

Press when adjusting the clock time.

#### **ØEXE.** key

Press to execute a timer program.

#### **OPROGRAM** key

Press when setting the program timer.

#### @O.T.T. (One-Touch Timer) key

Press for one-touch timer playback.

#### **3** Al TIMER 1/2 keys

Press for Al timer operation.

#### @ DISPLAY key

Press to change the display contents.

#### BAND key

Press to select the frequency band (FM/AM) to be received.

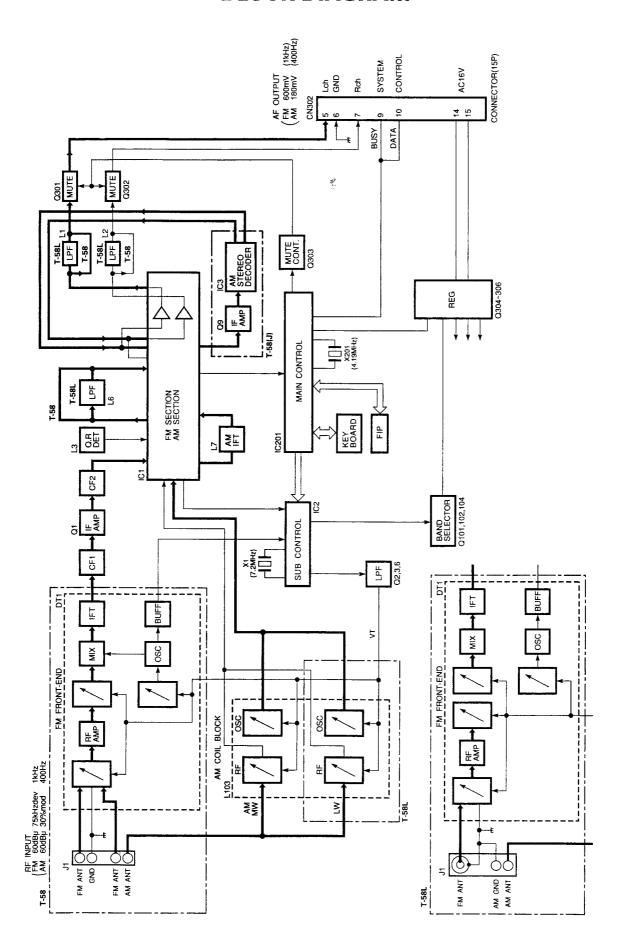
#### @ AUTO key

Press to select the auto tuning mode or to switch over the audio

#### **7** DIRECT key

Press when receiving a radio station using numeric keys.

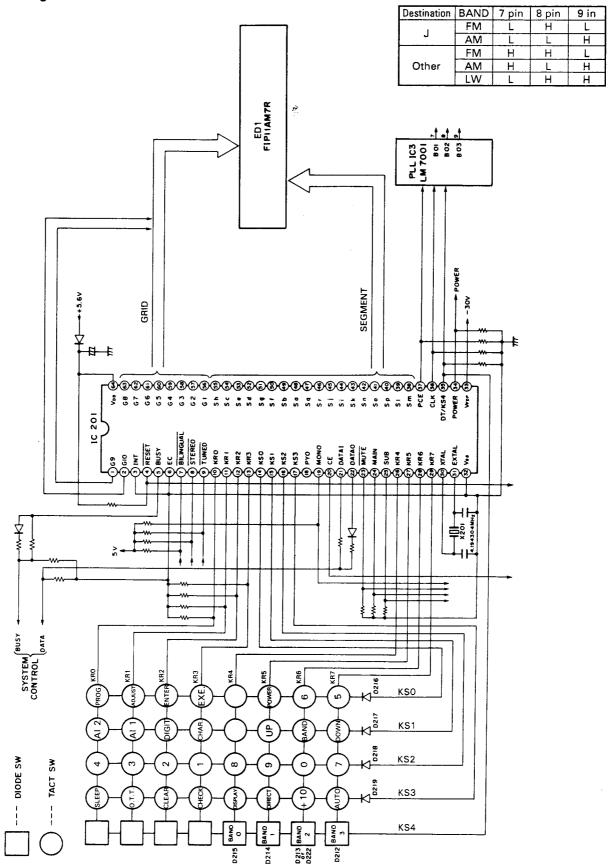
### **BLOCK DIAGRAM**



### **CIRCUIT DESCRIPTION**

1. Surround  $\mu$ -com : CXP50216-107S (IC201)

1-1. Block diagram



# **CIRCUIT DESCRIPTION**

#### 1-2. Pin function

No.	Name	1/0	Function
1, 2	G9, G10	0	FL grid output.
3	INT	-	Not used. (GND)
4	RESET	i	Reset input. ("H" : Normal, "L" : RESET)
5	BUSY	1/0	System control BUSY input/output
6	EC	_	Not used. (GND)
7	BIL		BILINGUAL. ("H" : Normal, "L" : BILINGUAL)
8	STEREO		Stereo signal input. ("H" : MONO, "L" : STEREO)
9	TÜNED	1	Tuning signal input. ("H" : ÑO, "L" : TUNED)
10~13	KR0~KR3		Key return input. ("H" : ON, "L" : OFF)
14~17	KS0~KS3	0	Key scan output. ("H" : ON, "L" : OFF)
18	PY0		Not used. (Open)
19	MONO	0	Forced MONO output. ("H": MONO, "L": STEREO)
20	CE	1	AC OFF detection input. ("H" : AC ON, "L" : AC OFF)
21	DATAI	1	System control DATA input.
22	DATAO	0	System control DATA output.
23	MUTE	0	Line mute. ("H" : MUTE OFF, "L" : MUTE ON)
24	MAIN	_	Not used.
25	SUB	-	Not used.
26~29	KR4~KR7	1	Key return input. ("H" : ON, "L" : OFF)
30	XTAL	-	Quartz oscillator 4.194304MHz.
31	EXTAL	-	Quartz oscillator 4.194304MHz.
32	Vss	-	GND pin.
33	VFDP	-	-30V.
34	POWER	0	POWER ON/OFF control. ("H": ON, "L": OFF)
35	DT/KS4	0	PLL DATA output. (Key scan output for destination switch)
36	CLK	0	PLL CLOCK output.
37	PCE	0	PLL CE output.
38~55	Sm~Sh	0	FL segment output. (m, I, p, o, n, k, i, j, r, q, a, b, f, g, d, e, c, h)
56~63	G1~G8	0	FL glid output.
64	VDD	-	+5V (Power supply).

## **CIRCUIT DESCRIPTION**

#### 2. Test mode

#### Method of setting

While turning the TUNING/CHARACTER knob to counterclockwise, turn AC ON.

#### Contents

POWER ON

FLL all lit

Test frequency setting. (Table 1)

#### Method of cancelling

Clearing the FL all lit state is performed by numeral key, BAND key, TUNING/CHARACTER knob.

#### Initial status setting (Reset)

1. Method

While pressing the ENTER key, turn AC ON.

2. Contents

The all memory is cleared and the initial status is fully restored. At this time, however, test frequency is newly memorized in the preset memory. (Table 1)

Table 1

Destination	T.	-58	T-58L
Preset channel	J type	Y, M, X type	T, E, G type
01 ch	FM 76.0 MHz	FM 98.0 MHz	FM 98.0 MHz
02 ch	FM 78.0 MHz	FM 108.0 MHz	FM 108.0 MHz
03 ch	FM 83.5 MHz	AM 630 kHz	AM 630 kHz
04 ch	FM 88.0 MHz	AM 990 kHz	AM 990 kHz
05 ch	FM 90.0 MHz	AM 1440 kHz	AM 1440 kHz
06 ch	AM 531 kHz	AM 1602 kHz	7.111 1440 KHZ
00 01	AM 630 kHz	(AM 1610 kHz)	AM 1602 kHz
07 ch	AM 990 kHz	FM 87.5 MHz	LW 162 kHz
08 ch	AM 1440 kHz	FM 87.5 MHz	LW 216 kHz
09 ch	AM 1602 kHz	FM 87.5 MHz	LW 270 kHz
10 ch	FM 76.0 MHz	FM 89.1 MHz	FM 89.1 MHz
11 ch	FM 76.0 MHz	FM 87.5 MHz	LW 281 kHz
12 ch	FM 76.0 MHz	FM 87.5 MHz	FM 87.5 MHz
13 ch	FM 76.0 MHz	FM 87.5 MHz	FM 87.5 MHz
14 ch	FM 76.0 MHz	FM 87.5 MHz	FM 87.5 MHz
15 ch	FM 76.0 MHz	FM 87.5 MHz	FM 87.5 MHz
16 ch	AM 990 kHz	FM 87.5 MHz	FM 87.5 MHz
17 ch	FM 89.1 MHz	FM 87.5 MHz	FM 87.5 MHz
18 ch	FM 76.0 MHz	FM 87.5 MHz	FM 87.5 MHz
19 ch	FM 76.0 MHz	FM 87.5 MHz	FM 87.5 MHz
20~30 ch	FM 76.0 MHz	FM 87.5 MHz	FM 87.5 MHz

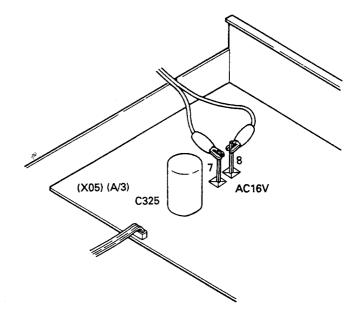
**Conditions by destination** 

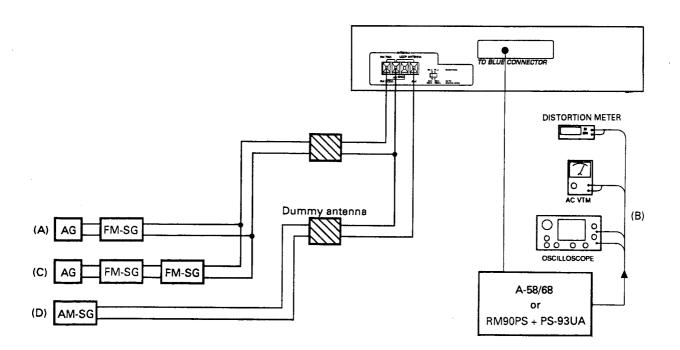
Toma	Switches					Receiving	Inter-channel	Inter-mediate	PLL reference
Туре	В3	B2	B1	B0	Band	frequency range	space	frequency	frequency
T-58 : J	0	0	0	0	FM	76.0~90.0 MHz	100 kHz	-10.75MHz	25 kHz
		السا		Ľ.	AM	531~1602 kHz	9kHz	+450 kHz	9 kHz
					FM	87.5~108.0MHz	100kHz or 50kHz	+10.7MHz	50 kHz
T-58 : M, Y	1	1 or 0	1	0	AM	531~1602 kHz or 530~1610kHz	9 kHz or 10kHz	+450 kHz	10kHz
T-58 : K. P	1	0	0	0	FM	87.5~108.0MHz	100 kHz	+10.7MHz	50 kHz
	<u> </u>				AM	530~1700 kHz	10kHz	+450 kHz	10 kHz
T-58 : X	1	1 1	0	0	FM	87.5~108.0MHz	50 kHz	+10.7MHz	50 kHz
		<u> </u>			AM	531~1602 kHz	9kHz	+450 kHz	9 kHz
					FM	87.5~108.0MHz	50 kHz	+10.7MHz	50 kHz
Γ-58L : T, E, G	1	1 1	0	1	MW	531~1602 kHz	9kHz	+450 kHz	9 kHz
					LW	153~281 kHz	1 kHz	+450 kHz	1 kHz

### **ADJUSTMENT**

The T-58 and T-58L don't have a power transformer. Use A-58/68 or RM-90PS, PS-93UA to supply power to the T-58/58L. If neither is available, apply AC 16V to pin 7 and pin 8 of the tuner unit (X05-, A/3).

When turning the power on, short the Check land (KR5 and KS0) (X05-, B/3).





# T-58/L

# **ADJUSTMENT/AJUSTES**

### **ENGLISH**

		INPUT	OUTPUT	TUNER	ALIGNMENT		
No.	ITEM	SETTINGS	SETTINGS	SETTINGS	POINTS	ALIGN FOR	FIG.
	ECTION	SELECTOR	: FM	-			
1	DISCRIMINATOR	(A) 98.0MHz 1kHz, ±75kHz dev.(M,X,Y type) 1kHz, ±40kHz dev.(E,T type) 60dBµ(ANT input)	Connect a DC voltmeter between TP9 and TP10. (X05-)	AUTO or MONO 98.0MHz	L3 (X05-)	0V	
2	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, ±67.5kHz dev. Pilot : ±7.5kHz dev. (M,X,Y type) 1kHz, ±40kHz dev. Pilot : ±6kHz dev. (E,T type) 60dBµ(ANT input)	(B)	AUTO 98.0MHz	IFT (W02-)	Minimum distortion.	
3	SEPARATION (E,T type only)	(C) 98.0MHz 1kHz, ±40kHz dev. Pilot : ±6kHz dev. Selector : L or R 60dBµ(ANT input)	(B)	AUTO 98.0MHz	VR1 (X05-)	Minimum crosstalk	

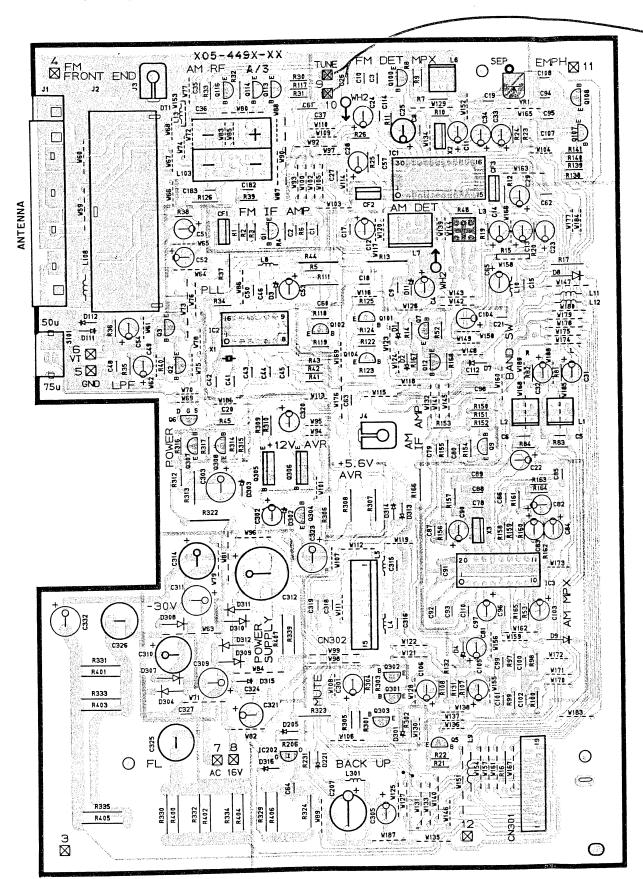
### **ESPANŐL**

Núm.	ÍTEM	AJUSTES DE ENTRADA	AJUSTES DE SALIDA	AJUSTES DEL SINTONIZADOR	PUNTOS DE ALINEACIÓN	ALINEACIÓN PARA	FIG
SECC	IÓN DE FM	SELECTOR	R; FM				
1	DISCRIMINADOR	(A) 98.0MHz 1kHz, ±75kHz dev.(M,X,Y type) 1kHz, ±40kHz dev.(E,T type) 60dBµ(Entrada de antena)	Conecte un voltímetro de CC entre TP9 y TP10. (X05-)	AUTO or MONO 98.0MHz	L3 (X05-)	OV	
2	distorsión (Estéreo)	(C) 98.0MHz 1kHz, ±67.5kHz dev. Pilot: ±7.5kHz dev. (M,X,Y type) 1kHz, ±40kHz dev. Pilot: ±6kHz dev. (E,T type) 60dBµ(Entrada de antena)	(B)	AUTO 98.0MHz	IFT (W02-)	Distorsión mínima.	
3	SEPARACIÓN (E,T type only)	(C) 98.0MHz 1kHz, ±40kHz dev. Pilot : ±6kHz dev. Selector : L or R 60dBµ{Entrada de antena)	(B)	AUTO 98.0MHz	VR1 (X05-)	Diafonía mínima.	

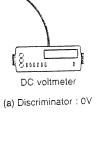
# PC BOARD (COMPONENT SIDE VIEW)

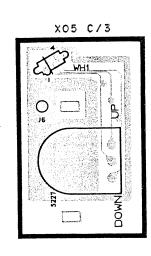
JAPAN MADE : X05-449X-XX (0-02 : J, 0-22 : Y  $\cdot$  M, 0-72 : X, 2-71 : E  $\cdot$  T  $\cdot$  G) SINGAPORE MADE : X05-449X-XX (0-01 : J, 0-21 : Y  $\cdot$  M, 0-71 : X, 2-70 : E  $\cdot$  T  $\cdot$  G)

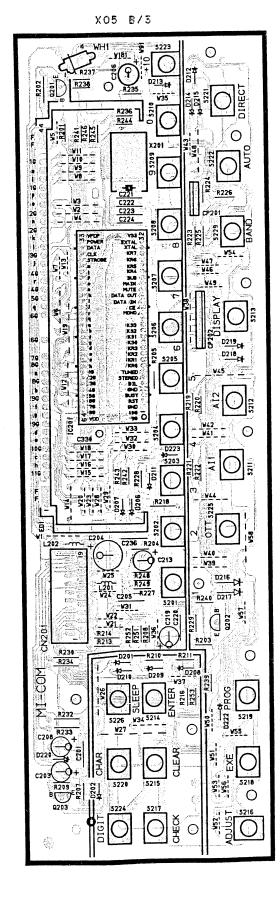
MALAYSIA MADE : X05-449X-XX (0-21 : I, 2-70 : E · T · G)



D.





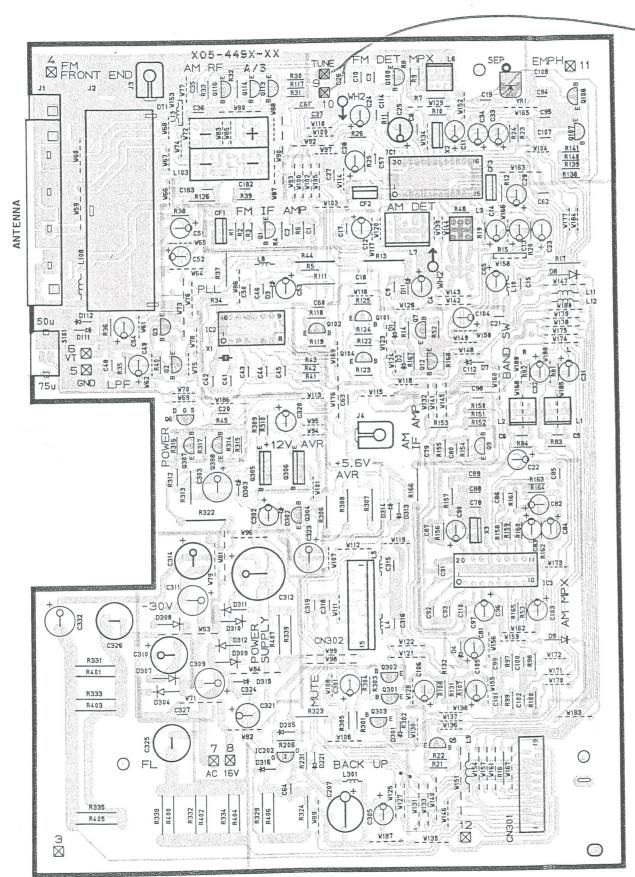


Refer to the schematic diagram for the values of resistors and capacitors.

## PC BOARD (COMPONENT SIDE VIEW)

JAPAN MADE : X05-449X-XX (0-02 : J, 0-22 : Y  $\cdot$  M, 0-72 : X, 2-71 : E  $\cdot$  T  $\cdot$  G) SINGAPORE MADE : X05-449X-XX (0-01 : J, 0-21 : Y  $\cdot$  M, 0-71 : X, 2-70 : E  $\cdot$  T  $\cdot$  G)

MALAYSIA MADE: X05-449X-XX (0-21: I, 2-70: E · T · G)



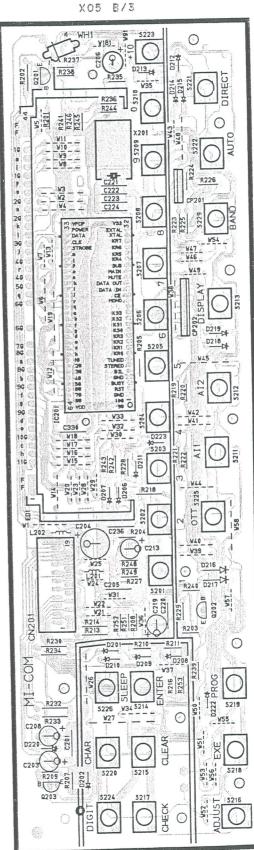
 $\mathbb{D}^{-1}$ 



DC voltmeter

(a) Discriminator: 0V

0



Refer to the schematic diagram for the values of resistors and capacitors.

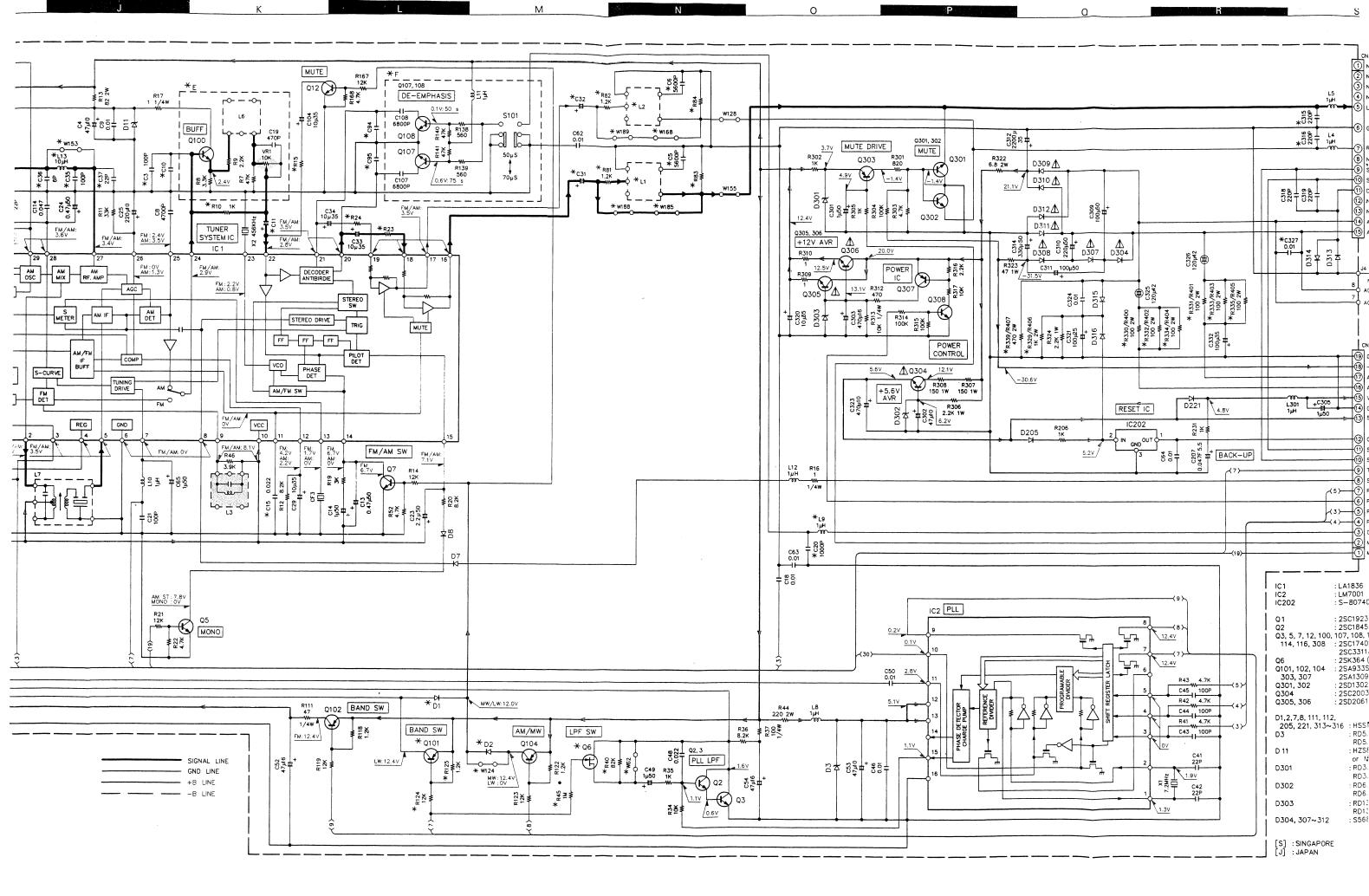
MODEL		DESTINATION			, ,																								
NAME	PRODUCT.P.	COUNTRY ABB.	NIT NAME	A,B C~E	F	R2	R10 R	15 R23,24	R30~33,40,45, 81,82,117,124,125	R83,84	R329~335,	R400~407	C3,15, 35	C5,6, 36,37	C10	C11	C20	C71 70	004	004.05	C315 316	T							
	JAPAN MADE	GENERAL MARKET M XOS	5-4490-22	YES NO						39K							+				C315,316, 327	CF1,2	L1.2	L9	L13	L103	Q6,101,113, 114,116	D1,2	W62,124,153,168, 185,188,189
ļ	OA! AIT MADE		-4490-72								YES	NO	¥ES.					50 بر0.47			NO	L72-0531-05	NO NO	YES	W153	L39-1328-05		NO	YES
T-58	SINGAPORE		5-4490-21							39K	YES	NO	YES	NO	1200P	2.2µ50	NO NO	0.47µ 50	YES	0.018						L39-1328-05		NO	
1	MADE		5-4490-71							39K	NO	YES	YES	NO	1200P	2.2µ50	YES	50 بر0.47	YES	0.022						L39-1328-05		1	YES
	MALAYSIA MADE	MALAYSIA I XO	5-4490-21	YES NO	YES	3.3K	YES 4	K 6.8K	NO NO	39K	NO NO	YES	YES	NO	1200P	2.2µ50	NO	0.47µ 50	YES	0.018	NO	172-0531-05	NO	NO.	W153	130 1700 05		NO	YES
	JAPAN MADE	EURUPE	5-4492-71							OUN	140	IES	TES	NO	1200P	2.2µ50	YES	0.47µ50	YES	0.022	NO	L72-0531-05	NO	YES	W153	L39-1328-05	NO NO	NO	YES YES
T-58L		GERMANY G			1. 1						YES	NO											1					110	123
1. 002	SINGAPORE/ MALAYSIA	EUROPE E	1	NO YES	NO	1K	NO 10	K 1.2K	YES	4.7K			NO	YES	1000P	1 1 50	NO	2.2µ50	NO	0.027	YES	172 0536 05	\v			L39-1325-05			
	MADE	GERMANY G	-4492-70	1							NO	YES				1				0.027	,,,,	L/2-0330-03	1163	NO	TES	L39-1325-05	YES	YES	NO
									<u> </u>						L								i			1	l		

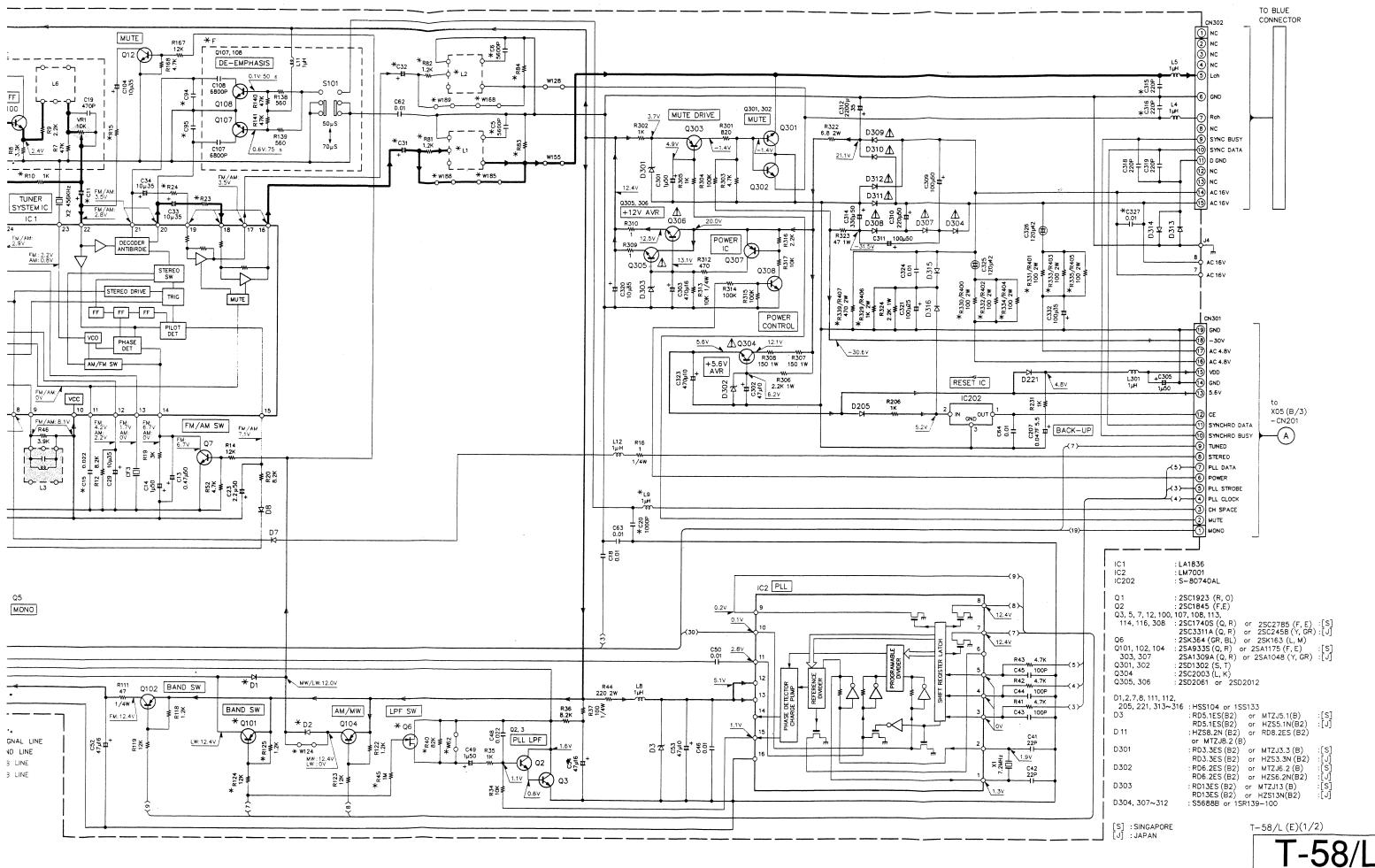
#### CAUTION

For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

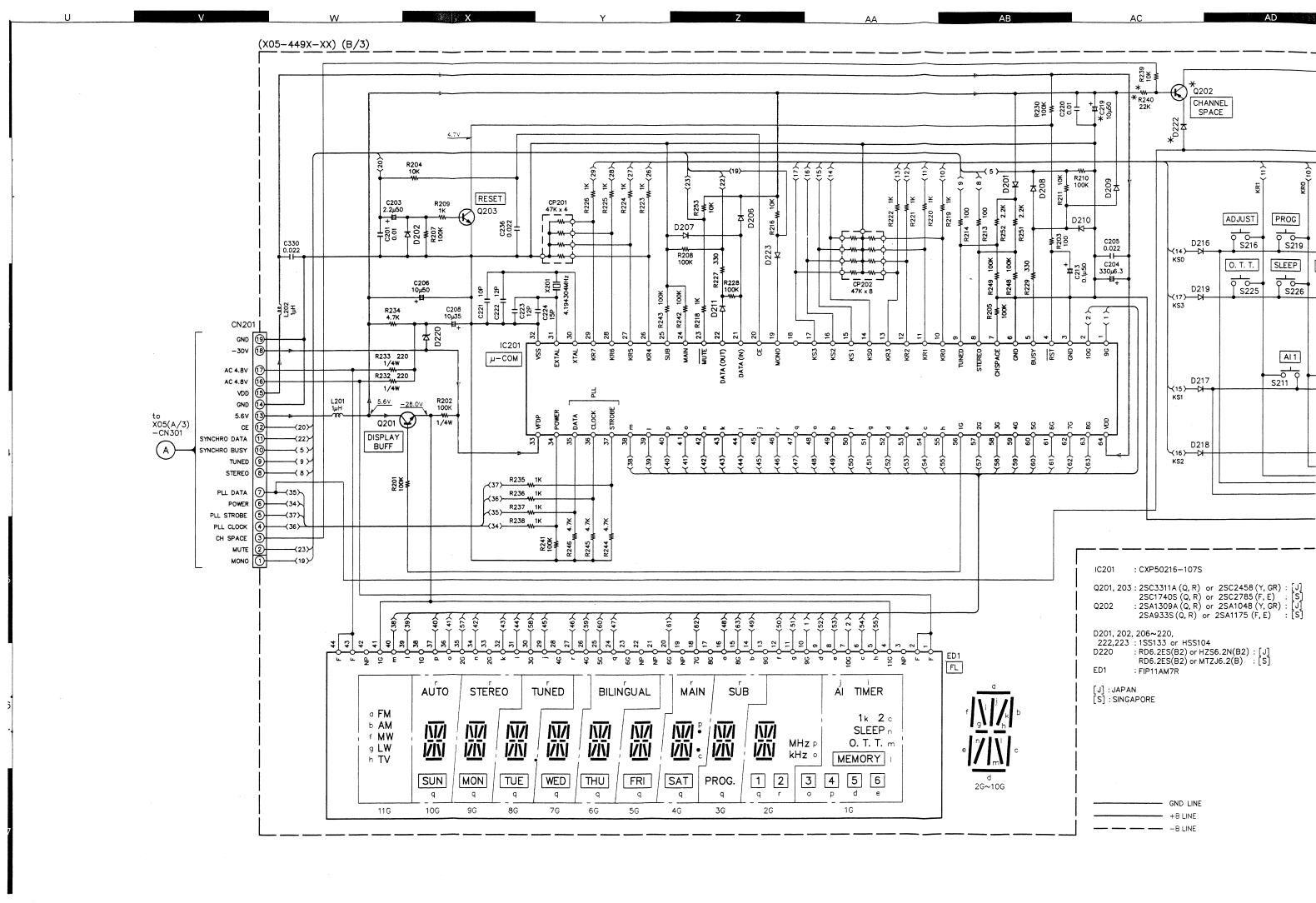
\( \Delta\) Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

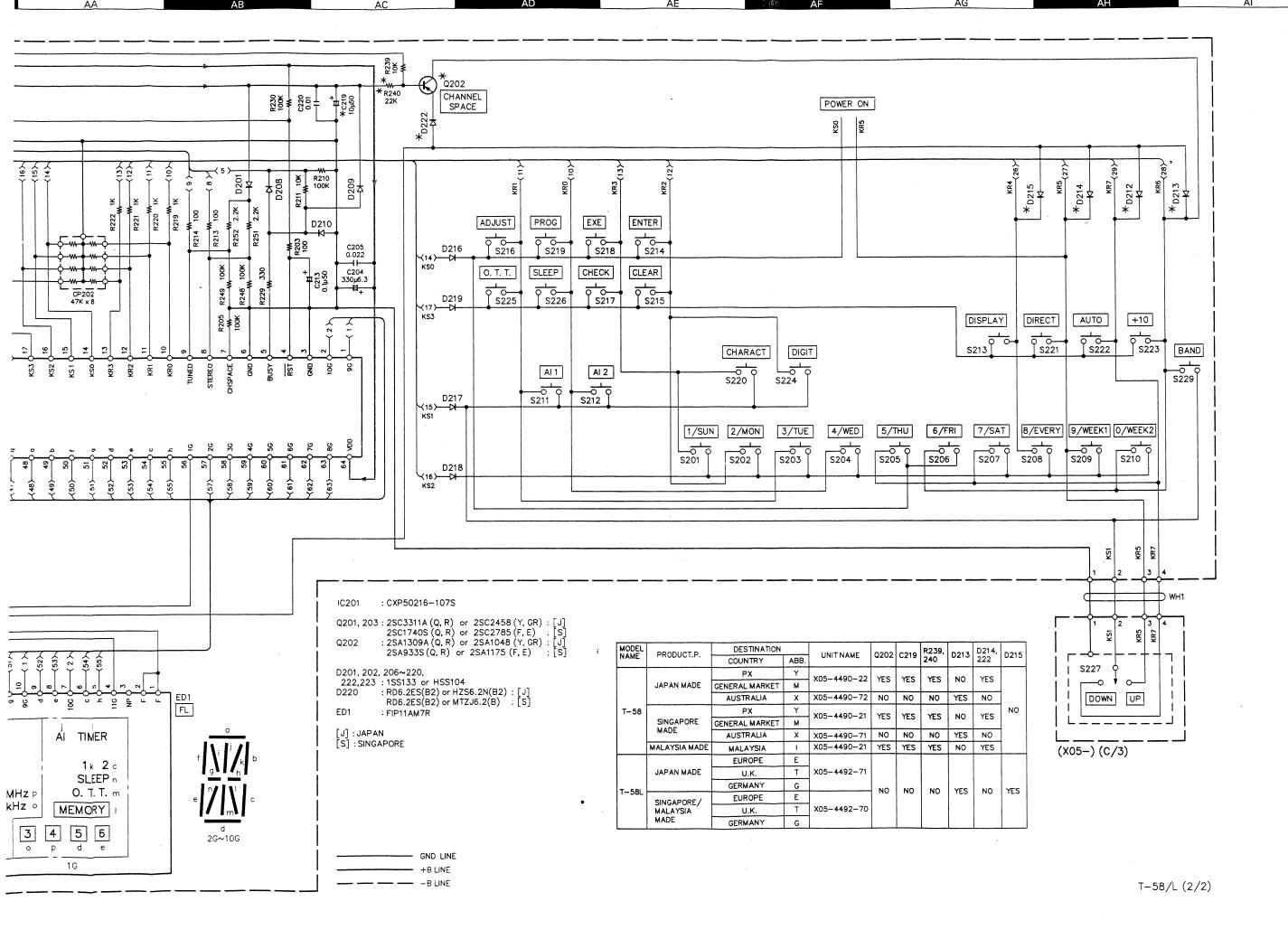
 DC voltages are as measured with a high impedance voltmeter during reception of an FM broadcast signal (with a signal strength of 60dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of an AM broadcast signal (with a signal strength of 60dB at the ANT terminal).



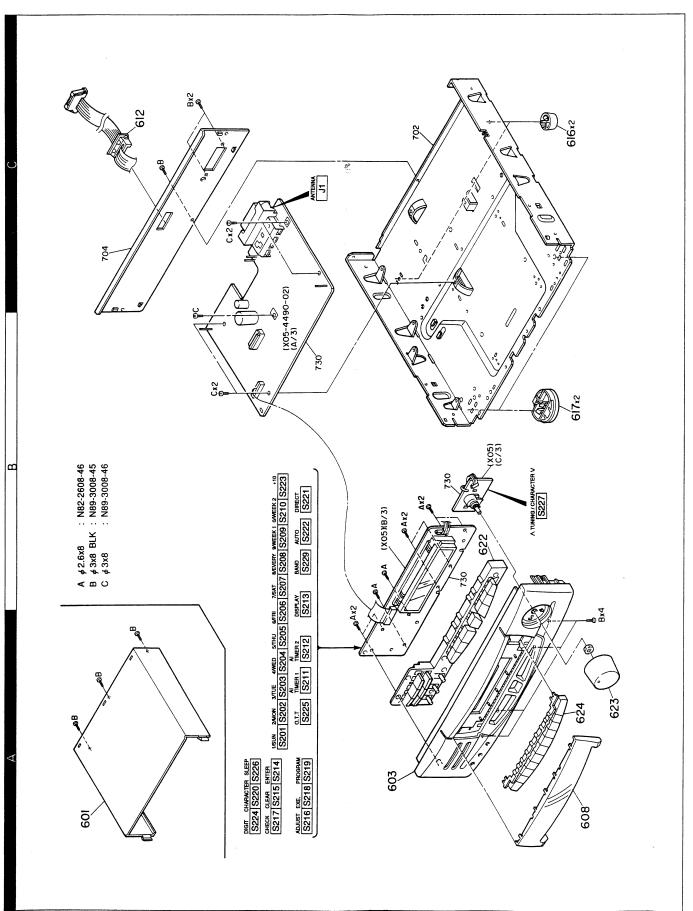


Y07-3692-70 KENWOOD





# **EXPLODED VIEW (UNIT)**



Parts with the exploded numbers larger than 700 are not supplied.

2SC1845 2SC1923 2SD2012 2SC2003 2SD1302





2SA1175 , 2SC2785

LM7001





2SA1048 2SA933S 2SC1740S 2SC2458 2SK163 2SK364





2SD2061

LA1836





2SA1309A 2SC3311A S-80740AL





#### CAUTION:

For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  Indicates safety critical components.

To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter during reception of an FM broadcast signal (with a signal strength of 60dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of an AM broadcast signal (with a signal strength of 60dB at the ANT terminal).

× New Parts

### **PARTS LIST**

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New Part		Description	Desti-	Ře-
参照番号	位 置	新	1	部品名/規格	nation 仕 向	marks 備考
			T-58/	L : JAPAN MADE		<b>_</b>
601 603 603	1 A 2 A 2 A	*	A01-1799-01 A60-0603-01 A60-0604-01	METALLIC CABINET PANEL PANEL	YMX ETG	
608 - - - -	2A	*	B10-2038-03 B46-0094-03 B46-0095-03 B46-0096-43 B46-0310-03	FRONT GLASS WARRANTY CARD WARRANTY CARD WARRANTY CARD WARRANTY CARD	Y Y X ETG	
612	1 C	*	E30-2777-05	CORD WITH CONNECTOR		
- - - -		* * *	H10-5810-02 H10-5811-02 H25-0232-04 H25-0382-04 H50-1132-04	POLYSTYRENE FOAMED FIXTURE (L) POLYSTYRENE FOAMED FIXTURE (R) PROTECTION BAG (235X350X0.03) PROTECTION BAG (800X400X0.03) ITEM CARTON CASE	Y YMX	
-		*	H50-1133-04	ITEM CARTON CASE	ETG	
616 617	2C 2B		J02-0366-15 J02-1040-05	FOOT REAR FOOT FRONT		
622 623 624	2B 2A 2A		K29-5949-02 K29-5950-14 K29-5982-03	KNOB KNOB TUNING/CHARACTER KNOB WEEK/+10		
A B C	2A,2B 1A,1C 1B,1C		N82-2608-46 N89-3008-45 N89-3008-46	BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW		
			T-58/L : SING	APORE, MALAYSIA MADE		
601 603 603	1 A 2 A 2 A	*	A01-1887-11 A60-0603-01 A60-0604-01	METALLIC CABINET PANEL PANEL	YMXI ETG(SW	
608 - - - -	2A		B10-2038-03 B46-0094-03 B46-0095-03 B46-0096-43 B46-0310-03	FRONT GLASS WARRANTY CARD WARRANTY CARD WARRANTY CARD WARRANTY CARD	(SW Y Y X ETG	
-			B46-0310-03	WARRANTY CARD	ETG(W	
512	1 C	*	E30-2777-05	CORD WITH CONNECTOR	(SW	
- - -		*	H10-5859-02 H10-5860-02 H10-5861-02 H10-5862-02 H25-0232-04	POLYSTYRENE FOAMED FIXTURE (L) POLYSTYRENE FOAMED FIXTURE (R) POLYSTYRENE FOAMED FIXTURE (L) POLYSTYRENE FOAMED FIXTURE (R) PROTECTION BAG (235X350X0.03)	EYMXTG EYMXTG IETG(W IETG(W Y	
• • •		*     *     *	H25-0382-04 H50-1190-04 H50-1213-04 H50-1214-04 H50-1223-04	PROTECTION BAG (800X400X0.03) ITEM CARTON CASE ITEM CARTON CASE ITEM CARTON CASE ITEM CARTON CASE	(SW ETG YX M I (W	
		*  }	H50-1224-04	ITEM CARTON CASE	ETG(W	
16 17	2C 2B		J02-0366-15 J02-1040-05	FOOT REAR FOOT FRONT	(SW (SW	

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\* New Parts

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Ref. No.	Address	New	Parts No.	Description	Desti- Re	<u>,</u> ]
参照番号	位 置	Parts 新	部品番号	部品名/規格	nation mai 仕 向備	rks
622 623 624	2B 2A 2A	* *	K29-5949-02 K29-5950-14 K29-5982-03	KNOB KNOB TUNING/CHARACTER KNOB WEEK/+10	(SW (SW (SW	
A B C	2A,2B 1A,1C 1B,1C		N89-3008-45 N89-3008-46	BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW	(SW (SW (SW	
				T (X05-449X-XX)		
C1 ,2 C3 C4 C5 ,6 C8		*	CK45FF1H103Z CC45FSL1H101J CE04KW1A470M CQ93FMG1H562J CK45FF1H472Z	CERAMIC         0.010UF         Z           CERAMIC         100PF         J           ELECTRO         47UF         10WV           MYLAR         5600PF         J           CERAMIC         4700PF         Z	YMXI ETG	
C9 C10 C10 C11 C11		*	CQ93FMG1H102J	CERAMIC 0.010UF Z MYLAR 1000PF J MYLAR 1200PF J ELECTRØ 1.0UF 50WV ELECTRØ 2.2UF 50WV	ETG YMXI ETG YMXI	
C12 C13 C14 C15 C17			CE04KW1V100M CE04KW1HR47M CE04KW1H010M CK45FF1H223Z CK45FF1H473Z	ELECTRO 10UF 35WV ELECTRO 0.47UF 50WV ELECTRO 1.0UF 50WV CERAMIC 0.022UF Z CERAMIC 0.047UF Z	YMXI	
C18 C19 C20 C21 C23				CERAMIC 0.010UF Z CERAMIC 470PF K CERAMIC 1000PF J CERAMIC 100PF J ELECTRØ 2.2UF 50WV	ETG YMI	
C24 C25 C26 C27 C28 ,29			CE04KW1HR47M CE04KW1A221M CC45FSL1H101J CK45FF1H473Z CE04KW1V100M	ELECTRO 0.47UF 50WV ELECTRO 220UF 10WV CERAMIC 100PF J CERAMIC 0.047UF Z ELECTRO 10UF 35WV		
C31 ,32 C31 ,32 C33 ,34 C35 C36			CE04LW1HR47M CE04LW1H2R2M CE04KW1V100M CC45FSL1H101J CC45FSL1H060D	ELECTRO 0.47UF 50WV ELECTRO 2.2UF 50WV ELECTRO 10UF 35WV CERAMIC 100PF J CERAMIC 6.0PF D	YMXI ETG YMXI ETG	
C37 C41 ,42 C43 -45 C46 C48			CC45FCH1H220J CC45FSL1H101J CK45FF1H103Z	CERAMIC 22PF J CERAMIC 22PF J CERAMIC 100PF J CERAMIC 0.010UF Z MYLAR 0.022UF J	ETG	
C49 C50 C51 C52 C53			CEO4KW1H010M	ELECTRO 1.0UF 50WV CERAMIC 0.010UF Z ELECTRO 1.0UF 50WV ELECTRO 47UF 16WV ELECTRO 47UF 10WV		
C54 C57 C60 C61 C62 -64			CE04KW1C470M CC45FCH1H220J CK45FF1H103Z C91-0745-05 CK45FF1H103Z	ELECTRØ 47UF 16WV CERAMIC 22PF J CERAMIC 0.010UF Z CERAMIC 100PF K CERAMIC 0.010UF Z	YMXI	
C65 C94 ,95		- 1		ELECTRO 1.OUF 50WV MYLAR 0.018UF J	x	

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参照番号	位 置	新	部品番号	部 品 名 /	<sup>′</sup> 規 格 ————————		備考
094 ,95 094 ,95 0104 0107,108		*	CQ93FMG1H223J CQ93FMG1H273J CE04KW1V100M CQ93FMG1H682J CK45FF1H473Z	MYLAR 0.02 MYLAR 0.02 ELECTRO 10UF MYLAR 6800F CERAMIC 0.04	7UF J 35WV PF J	YMI ETG YMI	
0182 0183 0201 0203 0204			CC45FSL1H150J CK45FF1H473Z C91-0769-05 C90-3254-05 C90-3216-05	CERAMIC 15PF CERAMIC 0.047 CERAMIC 0.010 ELECTRØ 2.200 ELECTRØ 33000	JF K 5 50WV		
0205 0206 0207 0208 0213			C91-0085-05 C90-3258-05 C90-1827-05 C90-3244-05 C90-3248-05	CERAMIC 0.022 ELECTRO 10UF ELECTRO 0.04 ELECTRO 10UF ELECTRO 0.1UI	50WV 7UF 5.5WV 35WV		
C219 C220 C221 C222,223 C224		*	C90-3258-05 C91-0769-05 C91-1235-05 C91-1237-05 C91-1239-05	ELECTRO 10UF CERAMIC 0.01 CERAMIC 10PF CERAMIC 12PF CERAMIC 15PF		YMI	
0236 0301 0302 0303 0305	The state of the s		C91-0085-05 CE04KW1H010M CE04KW1A470M CE04DW1C471M CE04KW1H010M	CERAMIC   0.02   ELECTRO   1.0U   ELECTRO   47UF   ELECTRO   470U   ELECTRO   1.0U	F 50WV 10WV F 16WV		
C309 C310 C311 C312 C314			CE04KW1H101M CE04KW1H221M CE04KW1H101M CE04KW1V222M CE04KW1H331M	ELECTRO 100U ELECTRO 220U ELECTRO 100U ELECTRO 2200 ELECTRO 330U	F 50WV F 50WV UF 35WV		
C315,316 C318,319 C320 C321 C323			CC45FSL1H221J CC45FSL1H221J CE04KW1V100M CE04KW1E101M CE04KW1A471M	CERAMIC 220P CERAMIC 220P ELECTRO 10UF ELECTRO 100U ELECTRO 470U	F J 35WV F 25WV	ETG	
C324 C325,326 C327 C330 C332			CK45FF1H103Z C90-1839-05 CK45FF1H103Z C91-0085-05 CE04KW1V101M	CERAMIC 0.01 NP-ELEC 120U CERAMIC 0.01 CERAMIC 0.02 ELECTRO 100U	F 42WV OUF Z 2UF N	ETG	
J1 J1	1 C 1 C		E20-0321-05 E20-0476-05	LOCK TERMINAL BOA		ETG YMXI	
J6			J11-0098-05	WIRE CLAMPER			
CF1 ,2 CF1 ,2 CF3 L1 ,2 L3		* *	L72-0531-05 L72-0536-05 L72-0581-05 L79-1219-05 L30-0910-05	CERAMIC FILTER CERAMIC FILTER CERAMIC FILTER LC FILTER FM IFT		YMXI ETG	
L4 ,5 L6 L7 L8 L9		*	L40-1091-17 L79-1220-05 L30-0488-05 L40-1091-17 L40-1091-17	SMALL FIXED INDUC LC FILTER AM IFT SMALL FIXED INDUC SMALL FIXED INDUC	TOR(1UH)	ETG	

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参照番号	位置新		部品名/規格		備考
L10 L11 L12 L13 L103		L40-1091-17 L40-1091-17 L40-1091-17 L40-1001-17 L40-1325-05	SMALL FIXED INDUCTOR(1UH) SMALL FIXED INDUCTOR(1UH) SMALL FIXED INDUCTOR(1UH) SMALL FIXED INDUCTOR(1UH) COMBINATION COIL	YMI ETG ETG	
L103 L108 L201,202 L301 X1		L39-1328-05 L40-1091-17 L40-1091-17 L40-1091-17 L77-1122-05	GOMBINATION COIL SMALL FIXED INDUCTOR(1UH) SMALL FIXED INDUCTOR(1UH) SMALL FIXED INDUCTOR(1UH) CRYSTAL RESONATOR(7.2MHz)	YMXI	
X2 X201		L78-0295-05 L77-1175-05*	RESONATOR (456kHz) CRYSTAL RESONATOR(4.194304MHz)		
CP201 CP202 R13 R37 R44		R90-0487-05 R90-0804-05 RS14KB3D820J RD14NB2E101J RS14KB3D221J	MULTI-COMP 47KX4 J 1/6W MULTI-COMP 47KX8 J 1/4W FL-PROOF RS 82 J 2W RD 100 J 1/4W FL-PROOF RS 220 J 2W		
R111 R306 R307,308 R313 R322		RD14NB2E470J RS14DB3A222J RS14DB3A151J RD14NB2E103J RS14KB3D6R8J	RD 47 J 1/4W FL-PROOF RS 2.2K J 1W FL-PROOF RS 150 J 1W RD 10K J 1/4W FL-PROOF RS 6.8 J 2W		
R323 R324 R329 R330-335 R339		RS14DB3A470J RS14DB3A222J RS14DB3D102J RS14DB3D101J RS14DB3D471J	FL-PR00F RS 47 J 1W FL-PR00F RS 2.2K J 1W FL-PR00F RS 1.0K J 2W FL-PR00F RS 100 J 2W FL-PR00F RS 470 J 2W		J
R400-405 R406 R407 VR1		RS14KB3D101J RS14KB3D102J RS14KB3D471J R12-3685-05	FL-PROOF RS 100 J 2W FL-PROOF RS 1.0K J 2W FL-PROOF RS 470 J 2W TRIMMING POT.(10K)	ETG	លលល
S101 S201-226 S227 S229		S31-2132-05 S40-1064-05 S29-1156-05 S40-1064-05	SLIDE SWITCH DE-EMPHASIS PUSH SWITCH TUNING/CHARACTER ROTARY SWITCH BAND PUSH SWITCH	YMI	
D1 ,2 D1 ,2 D3 D3 D3		HSS104 1SS133 HZS5.1N(B2) MTZJ5.1(B) RD5.1ES(B2)	DIODE DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE	ETG ETG	J
D7 ,8 D7 ,8 D11 D11 D11		HSS104 1SS133 HZS8.2N(B2) MTZJ8.2(B) RD8.2ES(B2)	DIODE DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		JS
D111,112 D111,112 D201,202 D201,202 D205-212		HSS104 1SS133 HSS104 1SS133 HSS104	DIODE DIODE DIODE DIODE DIODE DIODE		
D205-212 D213 D213 D214		1SS133 HSS104 1SS133 HSS104	DIODE DIODE DIODE DIODE	EXTG EXTG YMI	

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# T-58/L

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参照番号	位	置	Parts 新	部品番号	部品名/規格	仕 向	備考
0214 0215 0215 0216 0216-219				1SS133 HSS104 1SS133 HSS104 1SS133	DIØDE DIØDE DIØDE DIØDE DIØDE	YMI ETG ETG	-
)220 )220 )220 )221 )221				HZS6.2N(B2) MTZJ6.2(B) RD6.2ES(B2) HSS104 1SS133	ZENER DIODE ZENER DIODE ZENER DIODE DIODE DIODE		J
0222 0222 0223 0223 0301				HSS104 1SS133 HSS104 1SS133 HZS3.3N(B2)	DIODE DIODE DIODE DIODE ZENER DIODE	YMI	J
D301 D301 D302 D302 D302			*	MTZJ3.3(B) RD3.3ES(B2) HZS6.2N(B2) MTZJ6.2(B) RD6.2ES(B2)	ZENER DIØDE ZENER DIØDE ZENER DIØDE ZENER DIØDE ZENER DIØDE		JS
D303 D303 D303 D304 D304				HZS13N(B2) MTZJ13(B) RD13ES(B2) S5688B 1SR139-100	ZENER DIODE ZENER DIODE ZENER DIODE DIODE DIODE		S
D307-312 D307-312 D313-316 D313-316 ED1				S5688B 1SR139-100 HSS104 1SS133 FIP11AM7R	DIODE DIODE DIODE DIODE DIODE INDICATOR TUBE		
IC1 IC2 IC201 IC202 Q1			*	LA1836 LM7001 CXP50216-107S S-80740AL 2SC1923(R,0)	ANALOGUE IC IC(PLL FREQUENCY SYNTHESIZER) IC(U-COM) IC(VOLTAGE DETECTOR) TRANSISTOR		
Q2 Q3 Q3 Q3 Q3				2SC1845(F,E) 2SC1740S(Q,R) 2SC2458(Y,GR) 2SC2785(F,E) 2SC3311A(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		5
Q5 Q5 Q5 Q5 Q6				2SC1740S(Q,R) 2SC2458(Y,GR) 2SC2785(F,E) 2SC3311A(Q,R) 2SK163(L,M)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR FET	ETG	01.101.1
Q6 Q7 Q7 Q7 Q7				2SK364(GR,BL) 2SC1740S(Q,R) 2SC2458(Y,GR) 2SC2785(F,E) 2SC3311A(Q,R)	FET TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	ETG	
Q12 Q12 Q12 Q12 Q100				2SC1740S(Q,R) 2SC2458(Y,GR) 2SC2785(F,E) 2SC3311A(Q,R) 2SC1740S(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	ETG	

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参照番号	位 置	新		品	番	号	部	品	名,	/ 規	格	nation 仕 向	marks 備考
Q100 Q100 Q100 Q101 Q101			2SC24 2SC27 2SC33 2SA10 2SA11	85(1 11A 48('	F,E) (Q,F Y,GF	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR					ETG ETG ETG ETG ETG	J S J J S
Q101 Q101 Q102 Q102 Q102			25A13 25A93 25A10 25A11 25A13	35(0 48() 75(1	Q,R) Y,GR F,E)	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR					ETG ETG	J S J S J
Q102 Q104 Q104 Q104 Q104			2SA93: 2SA10: 2SA11: 2SA13: 2SA93:	48() 75(I 09 <b>A</b> )	Y,GR F,E) (Q,R	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR						5 J 5 J 5
Q107,108 Q107,108 Q107,108 Q107,108 Q113,114			2SC174 2SC245 2SC276 2SC335 2SC174	50() 85() 11 <b>A</b> (	Y,ĞR F,E) (Q,R	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR					YMI YM YMI YM ETG	S J S J S
Q113,114 Q113,114 Q113,114 Q116 Q116			2SC245 2SC276 2SC335 2SC174 2SC245	85(F 11 <b>A</b> ( 40S(	F,E) (Q,R (Q,R	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR					ETG ETG ETG ETG ETG	J S J S J
Q116 Q116 Q201 Q201 Q201			2SC278 2SC337 2SC174 2SC248 2SC278	11A( 10S( 58()	(Q,R (Q,R (,GR	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR					ETG ETG	S J S J S
9201 9202 9202 9202 9202			2SC331 2SA104 2SA117 2SA130 2SA933	18() 75(F 09 <b>A</b> (	(,GR F,E) (Q,R	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR					YM YMI YM YMI	J S J S
9203 9203 9203 9203 9301,302			2SC174 2SC245 2SC278 2SC331 2SD130	58(Y 35(F 1A(	(,GR (,E) (Q,R	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR						S J S J
9303 9303 9303 9303 9304			2SA104 2SA117 2SA130 2SA933 2SC200	75(F 19A( 8S(G	Q,R Q,R (,R)		TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR						J S J
9305,306 9305,306 9307 9307 9307			2SD201 2SD206 2SA104 2SA117 2SA130	1 8(Y 5(F	,E)		TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR						J S J
2307 2308 2308 2308 2308			2SA933 2SC174 2SC245 2SC278 2SC331	0S( 8(Y 5(F	Q,R ,GR ,E)	)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR						201 201

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DT1 DT1			W02-1166- W02-1167-	-15 -05	FM FRONT-END ASSY FM FRONT-END ASSY	ETG YMXI
			- <del> </del>		<b>2</b>	
			T.	·		

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### **PARTS LIST**

**CAPACITORS** 

1 = Type ... ceramic, electrolytic, etc.

4 = Voltage rating

2 = Shape ... round, square, ect.

5 = Value

3 = Temp. coefficient

6 = Tolerance



· Capacitor value

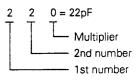
010 = 1pF

100 = 10pF

101 = 100pF

 $102 = 1000 pF = 0.001 \mu F$ 

 $103 = 0.01 \mu F$ 



• Temperature coefficient

1st Word	С	L	Р	R	S	Т	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	Н	J	K	L	
ppm/°C	±30	±60	±120	±250	±500	
Example : CC45TH = $-470 \pm 60$ ppm/°C						

· Tolerance (More than 10pF)

Code	С	D	G	J	K	М	X	Z	Р	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40	+80	+100	More than $10\mu F - 10 \sim +50$
							-20	-20	-0	Less than $4.7\mu\text{F} - 10 \sim +75$

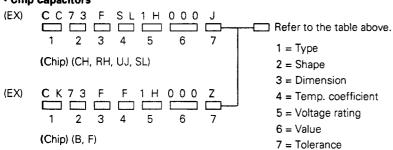
#### (Less than 10pF)

Code	В	С	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

Voltage rating

2nd word	Α	В	С	D	E	F	G	Н	J	K	V
1st word											
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	-
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	-
3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	_

· Chip capacitors

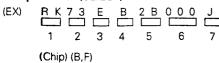


Dimension (Chip capacitors)

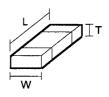
Dimension code	L	W	Ť
Empty	$5.6 \pm 0.5$	$5.0 \pm 0.5$	Less than 2.0
Α	$4.5 \pm 0.5$	$3.2 \pm 0.4$	Less than 2.0
В	$4.5 \pm 0.5$	$2.0 \pm 0.3$	Less than 2.0
С	$4.5 \pm 0.5$	1.25 ± 0.2	Less than 1.25
D	$3.2 \pm 0.4$	$2.5 \pm 0.3$	Less than 1.5
E	$3.2 \pm 0.2$	1.6 ± 0.2	Less than 1.25
F	$2.0 \pm 0.3$	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	$0.8 \pm 0.2$	Less than 1.0

#### **RESISTORS**

· Chip resistor (Carbon)



Dimension



· Carbon resistor (Normal type)

					.,		
(EX)						000	
	1	2	3	4	5	6	7

1 = Type

5 = Rating wattage

2 = Shape

6 = Value

3 = Dimension

7 = Tolerance

4 = Temp. coefficient

Dimension (Chip resistor)

Dimension code	L	W	Т
Е	$3.2 \pm 0.2$	$1.6 \pm 0.2$	1.0
F	$2.0 \pm 0.3$	1.25 ± 0.2	1.0
G	1.6±0.2	0.8±0.2	0.5±0.1

Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	ЗА	1W
2A	1/10W	2E	1/4VV	3D	2W
2B	1/8W	2H	1/2W		

### **SPECIFICATIONS**

T-58	T-58L
FM tuner section	FM tuner section
Tuning frequency range87.5MHz~108MHz	Tuning frequency range
Sensitivity (MONO at 75Ω)1.2μV/13.2dBf	Sensitivity (DIN at 75 $\Omega$ )
50dB quieting sensitivity (at 75Ω)	MONO
STEREO31.6μV/41.2dBf	Total harmonic distortion (DIN
Total harmonic distortion (at 1kHz, 65dBf input)	MONO
MONO0.6%	STEREO
STEREO0.7%	Signal to noise ratio (DIN weight
Signal to noise ratio (at 1kHz, 65dBf input)	MONO
MONO75dB	** STEREO
STEREO68dB	Stereo separation (DIN at 1kH
Stereo separation (at 1kHz)40dB	Selectivity (DIN±300kHz)
Selectivity (±400kHz)50dB	Frequency response (30Hz~15kl
Frequency response (30Hz~15kHz)+0.5dB, -3.0dB	
	MW tuner section
AM tuner section	Tuning frequency range
Tuning frequency range	Usable sensitivity
9kHz step531kHz~1,602kHz	Signal to noise ratio
10kHz step530kHz~1,610kHz	Total harmonic distortion
Usable sensitivity12µV/(500µV/m)	
Signal to noise ratio48dB	LW tuner section
Total harmonic distortion0.6%	Tuning frequency range
	Usable sensitivity
General General	Signal to noise ratio
Dimensions W : 360mm (14-3/16")	Total harmonic distortion
H : 90mm (3-9/16")	
D : 372mm (14-5/8")	General

T-58L	
FM tuner section	
Tuning frequency range87.5MHz~108MH Sensitivity (DIN at 75Ω)	łz
MONO1.2μV/13.2dE	3f
Total harmonic distortion (DIN at 1kHz, 65.2dBf input)	-
MONO	%
STEREO	%
Signal to noise ratio (DIN weighted at 1kHz, 65.2dBf input)	
MONO	
** STEREO	
Stereo separation (DIN at 1kHz)40d	
Selectivity (DIN±300kHz)	
11equency response (50112-15k12)	_
MW tuner section	
Tuning frequency range 531kHz~1,602kH	
Usable sensitivity12μV/(500μV/n	
Signal to noise ratio48d	
Total harmonic distortion	70
LW tuner section	
Tuning frequency range153kHz~281kH	lz
Usable sensitivity22µ	
Signal to noise ratio45d	
Total harmonic distortion0.69	%
General	
DimensionsW: 360mm (14-3/16'	1)
H : 90mm (3-9/16")	•
D : 372mm (14-5/8")	
Weight (net)2.5kg (5.5lb	o)

Note: KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

#### Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the General Market (M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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